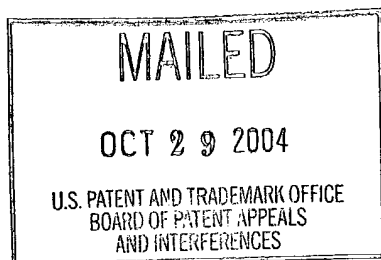


The opinion in support of the decision being entered today was **not** written for publication and is **not** binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte LOYD R. HORNBAC III and JOSEPH C. PEISERT



Appeal No. 2004-1854
Application No. 08/971,851

ON BRIEF

Before WALTZ, TIMM, and JEFFREY T. SMITH, Administrative Patent Judges.

WALTZ, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on an appeal from the primary examiner's final rejection of claims 12 through 16, 18 through 20, 23 through 25, 27 through 31, 34, and 36 through 47.¹ Claim 26 is the only other claim pending and stands allowed by the examiner (Brief, page

¹Claim 43 was not listed as a pending claim by the examiner in the final rejection dated July 1, 2003, Paper No. 32, see page 1. As explained by appellants (Response dated Sep. 2, 2003, page 1), claim 43 was apparently omitted in the examiner's final Office action due to inadvertent misnumbering/cancellation but is still a pending claim. Since claim 43 has been included as a pending claim in the Brief (page 2) and in the rejections on appeal (Answer, pages 4 and 7), we consider this claim to be included in appellants' appeal.

2; Answer, page 8). We have jurisdiction pursuant to 35 U.S.C. § 134.

According to appellants, the invention is directed to a pollution control device including a surface tension relieved mounting article for use in mounting monolithic structures, where the mounting article is formed of a sheet material that prevents exhaust gas from bypassing the pollution control element and has at least one score-line in a major top surface across the entire width of the sheet corresponding to the direction of exhaust gas flow through the device (Brief, page 3).² Appellants state that the claims do not stand or fall together (Brief, page 5). To the extent appellants provide specific, substantive arguments for the patentability of individual claims, we consider these claims separately. *In re McDaniel*, 293 F.3d 1379, 1383, 63 USPQ2d 1462, 1465 (Fed. Cir. 2002). Representative independent claim 12 is reproduced below:

12. A pollution control device comprising:
a housing;
a pollution control element having an outer curvature and being disposed within said housing; and
a mounting article disposed between said pollution control element and said housing, said mounting article comprising a sheet material useful for mounting said pollution control element and

²We note that appellants also present claims to the mounting article *per se* (see claims 34 and 36-38 on appeal).

preventing exhaust gas from bypassing the pollution control element, said sheet material having major top and bottom surfaces, a thickness, a length, and a width corresponding to a direction of exhaust gas through the device, said sheet material having at least one score-line in the major top surface and across the entire width of said sheet material to relieve enough surface tension in said sheet material that, when said sheet material is disposed around the curvature of said pollution control element, cracking or breaking of said sheet material that would otherwise occur is avoided.

The examiner has relied upon the following references as evidence of obviousness:

Corn	5,332,609	Jul. 26, 1994
Kitamura et al. (JP '916) (published Japanese <i>kokai</i> patent application)	61-89916	May 8, 1986
Kusada et al. (JP '313) (published Japanese <i>kokai</i> patent application) ³	02-061313	Mar. 1, 1990

The following rejections are before this panel for review in this appeal:

(1) claims 12-16, 18-20, 23-25, 27-28, 34, 36-38 and 42-47 stand rejected under 35 U.S.C. § 103(a) as unpatentable over JP '916 (Answer, page 4);

(2) claims 19-20 stand rejected under section 103(a) as unpatentable over JP '916 in view of JP '313 (Answer, page 5);

³We rely upon and cite from full English translations of the JP '916 and JP '313 documents, previously made of record (translations listed as PTO 99-3188 and PTO 99-3034, respectively).

Appeal No. 2004-1854
Application No. 08/971,851

(3) claims 29-31 and 39-41 stand rejected under section 103(a) as unpatentable over JP '916 in view of Corn (Answer, page 6);

(4) claims 12-16, 18-20, 23-25, 27-28, 34, 36-38 and 42-47 stand rejected under section 103(a) as unpatentable over JP '313 in view of JP '916 (Answer, page 7); and

(5) claims 29-31 and 39-41 stand rejected under section 103(a) as unpatentable over JP '313 in view of JP '916 and Corn (Answer, page 8).⁴

We *affirm* all of the examiner's rejections on appeal essentially for the reasons stated in the Answer and for those reasons set forth below.

⁴The rejections under the first and second paragraphs of 35 U.S.C. § 112 presented in the final Office action dated July 1, 2003, Paper No. 32, pages 2-3, have been withdrawn by the examiner (Answer, page 2).

OPINION

A. The Rejections over JP '916 alone or in view of JP '313 or Corn

The examiner finds that JP '916 discloses a pollution control device comprising a housing 3 containing a pollution control element 2, a mounting article disposed between the housing and pollution control element, where the mounting article comprises a sheet material 1 having major top and bottom surfaces, a thickness, a length, a width, with a plurality of score lines in the top and bottom surfaces of the sheet material (Answer, page 4). The examiner recognizes that JP '916 only discloses an embodiment where the score lines extend the length of the sheet material (Answer, page 9) rather than across the entire width as required by the claims on appeal. However, the examiner bases the conclusion of obviousness on the teaching or suggestion found in the whole reference, namely the teaching in JP '916 that any shape, any number or any arrangement means can be used for the score lines as long as the same effect of improving winding while maintaining excellent air-tight capability is achieved (Answer, pages 4 and 9, citing pages 3-4 of the translation). Accordingly, the examiner concludes that it would have been obvious to one of ordinary skill in this art to have selected any appropriate direction for the

score lines, e.g., across the length or width, as long as the score lines function for their intended benefits, absent a showing of unexpected results (Answer, page 4).

With regard to the rejection of claims 19 and 20, the examiner applies JP '313 as evidence that the use of intumescent material for the sheet material was well known in the art (Answer, page 6). With regard to the rejection of claims 29-31 and 39-41, the examiner applies Corn as evidence that an oval shape of the pollution control element was well known in the art (*id.*).

Appellants argue that the grooves or "continuous concaves 1a" of JP '916 extend only in the length direction of the sheet material, rather than across its width as required by the claims on appeal (Brief, page 9). Appellants point out that the PTO translation specifically states that "grooves 1a are continuously provided onto both surfaces of a seal mat 1 in the longer lateral direction" (Brief, sentence bridging pages 9-10).

Appellants' arguments are not persuasive. As noted by the examiner (Answer, page 9), a reference disclosure is not limited to its specific examples or embodiments. See *In re Widmer*, 353 F.2d 752, 757, 147 USPQ 518, 523 (CCPA 1965). JP '916 discloses that Fig. 1 is a perspective view of "an embodiment of the present invention" (page 3, second full paragraph). "[A]ll of the relevant

teachings of cited references must be considered in determining what they fairly teach to one having ordinary skill in the art. [Citations omitted]." *In re Mercier*. 515 F.2d 1161, 1165, 185 USPQ 774, 778 (CCPA 1975).

Appellants argue that, contrary to the examiner's position, JP '916 does not contain any suggestion that the direction of the grooves 1a can or should be altered (Brief, page 11). Appellants argue that the teaching in JP '916 that "[a]s long as said effect is obtained, any shape, any number, and any arrangement means can be used for the grooves" refers to the process by which the score lines are arranged on the sheet material, rather than their orientation (Brief, page 11; Reply Brief, page 3).

Appellants' arguments are not persuasive. Although the disclosure of JP '916 does follow the above quoted "arrangement means" with examples of different shapes of grooves (translation, page 4, ll. 1-3), we again note that a reference is not limited to its examples (*id.* at line 1, "[f]or example"). See *In re Widmer*, *supra*. We agree with the examiner that it would have been reasonable to one of ordinary skill in this art, based on the prior art as a whole, to employ the grooves of JP '916 in any direction with a reasonable expectation of success, namely to reduce the excessive occurrence of compressive pressure on the pollution

control element while maintaining an excellent air-tight capability (translation, pages 1-2). See *In re Vaeck*, 947 F.2d 488, 493, 20 USPQ2d 1438, 1442 (Fed. Cir. 1991). The generic term "arrangement means" taught by JP '916 (sentence bridging pages 3-4) would have reasonably suggested alternative directions of the grooves, as evidenced by the "numerous grooves" formed diagonal to the axis of the pollution control element as taught by JP '313 to achieve the same effect as desired by JP '916 (see JP '313, page 2, claims 1 and 4; page 4, ll. 2-5; page 8, second full paragraph; and Figure 2).

Appellants argue that the grooves in the mat of JP '916 are designed solely to reduce the excessive occurrence of compressive pressure on the pollution control element while maintaining air-tight capability (Brief, page 10). Therefore appellants argue that there is no motivation to modify JP '916 as proposed by the examiner since if the grooves were positioned in the direction of the gas flow through the device, the sheet material of JP '916 would be unlikely to maintain its "excellent air-tight capability" due to exhaust gas flow through the spacing between the housing and sheet material or the spacing between the sheet material and the pollution control element (Brief, pages 11-12).

These arguments are also not persuasive. Appellants have not provided objective evidence or convincing reasoning to support their argument that "it is only when there is 'excessive compressive force' applied that a part of the projections b on the surface of the seal-mat move into the grooves/concaves 1a" (Brief, page 12). See *In re Scarborough*, 500 F.2d 560, 566, 182 USPQ 298, 302 (CCPA 1974) (generally held that attorney argument is insufficient to take the place of evidence or expert testimony). Contrary to appellants' argument, JP '916 specifically teaches that "[e]ven though a compression reduction effort is obtained as described above using grooves 1a, ridges b on both surfaces of seal mat 1 are still adhered onto honeycomb catalyst 2 or inside casing 3; because of this, seal mat 1 can maintain excellent sealing performance." Page 3, third full paragraph, last sentence.

Appellants argue that the cross-sectional shapes of the score lines, as set forth in dependent claims 18 and 47, are not suggested by JP '916 (Brief, page 13). As noted by the examiner (Answer, page 11), JP '916 would have suggested to one of ordinary skill in this art that the shape of the score lines was not critical as long as the same overall effect was achieved.

Appellants argue that JP '313 supplies none of the deficiencies of JP '916 as previously discussed (Brief, page 16).

Furthermore, while it is conceded that Corn discloses an oval shaped pollution control element, appellants argue that Corn does not supply any of the deficiencies of JP '916 as discussed above (*id.*). Therefore, we adopt our comments from above with regard to appellants' previous arguments.

For the foregoing reasons, as well as those stated in the Answer, we determine that the examiner has established a *prima facie* case of obviousness based on the reference evidence. Based on the totality of the record, including due consideration of appellants' arguments, we determine that the preponderance of the evidence weighs most heavily in favor of obviousness. Accordingly, we affirm the examiner's rejections based on JP '916 as the primary or sole reference, further in view of JP '313 and Corn.

B. The Rejections based on JP '313 in view of JP '916 or Corn

We adopt the examiner's factual findings and conclusions of law as noted above and in the Answer for the same reasons as discussed above, since the same reference evidence has been presented, albeit in a different order. See *In re Bush*, 296 F.2d 491, 496, 131 USPQ 263, 267 (CCPA 1961) (where rejection is predicated on two references, each containing pertinent disclosure, the order of the references is of no significance, but merely a matter of exposition).

Appeal No. 2004-1854
Application No. 08/971,851

Accordingly, we affirm the examiner's rejections based on JP '313 in view of JP '916, as well as JP '313 in view of Corn.

C. Summary

All of the rejections on appeal are affirmed.

Appeal No. 2004-1854
Application No. 08/971,851

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a)(iv) (effective Sep. 13, 2004; 69 Fed. Reg. 49960 (Aug. 12, 2004); 1286 Off. Gaz. Pat. Office 21 (Sep. 7, 2004)).

AFFIRMED

THOMAS A. WALTZ
Administrative Patent Judge

Catherine Timm
CATHERINE TIMM
Administrative Patent Judge

BOARD OF PATENT
APPEALS
AND
INTERFERENCES


JEFFREY T. SMITH
Administrative Patent Judge

TAW/jrg

Appeal No. 2004-1854
Application No. 08/971,851

3M INNOVATIVE PROPERTIES COMPANY
PO BOX 33427
ST. PAUL, MN 55133-3427